

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2002-NE-43-AD; Amendment 39-13199; AD 2003-12-14]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Turbomeca S.A. Arriel 1 Turboshift Engines**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

---

**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that is applicable to Turbomeca S.A. Arriel 1 series turboshaft engines. This amendment requires initial and repetitive visual inspections for ingestive erosion, and cleaning if necessary, of M02 and M03 modules. This amendment is prompted by reports from the manufacturer of an unbalance due to accumulation of dust in the M03 module. The actions specified by this AD are intended to prevent an unbalance of the gas generator rotating assembly which may lead to deterioration of the gas generator rear bearing and uncommanded engine shutdown.

**DATES:** Effective July 25, 2003.

**ADDRESSES:** Information regarding this action may be examined, by appointment, at the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

**FOR FURTHER INFORMATION CONTACT:** Antonio Cancelliere, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7751; fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that is applicable to Turbomeca S.A. Arriel 1 series turboshaft engines was published in the Federal Register on February 12, 2003 (68 FR 7084). That action proposed to require initial and repetitive visual inspections for ingestive erosion, and cleaning if necessary, of M02 and M03 modules.

## **Comments**

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Three comments were made by the manufacturer.

### **Request To Change the Prompted By Statement**

In the first comment, the manufacturer requests that the FAA change the "prompted by" statement in the Summary to more accurately describe the module of the engine that is affected by the unbalance due to the accumulation of ingested dust. The manufacturer requests that the "prompted by" statement be changed in the AD to remove the words "\* \* \* ingestive erosion of M02 and M03 modules" and that they be replaced with "\* \* \*"an unbalance due to the accumulation of dust in the M03 module."

The FAA agrees and the Summary is changed in this AD.

### **Request To Remove Model 1E From the Applicability**

In the second comment, the manufacturer requests that we remove the model 1E from the Applicability statement because this model is no longer in service nor included on the Direction Generale de L'Aviation Civile (DGAC) Type Certificate. The model 1E was also erroneously included in the manufacturer's service bulletin.

The FAA does not agree. The model 1E is still included in the FAA Type Certificate Data Sheet for Arriel 1 engines; therefore, for consistency with the existing documentation, the FAA maintains the model 1E in the Applicability statement.

### **Request To Change Regulatory Paragraph (a)(2)**

In the third comment, the manufacturer requests that we change paragraph (a)(2) "Modification TU 175 Not Incorporated". The manufacturer asks that the FAA change "area D as defined in the engine maintenance manual \* \* \*" to "area III as defined in the engine maintenance manual, even if it has not reached 1,000 operating hours, \* \* \*".

The FAA agrees and paragraph (a)(2) of this AD is changed.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes described previously. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

## **Regulatory Analysis**

This final rule does not have federalism implications, as defined in Executive Order 13132, because it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of

the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Safety.

### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

## **2003-12-14 Turbomeca S.A.: Amendment 39-13199. Docket No. 2002-NE-43-AD.**

**Applicability:** This airworthiness directive (AD) is applicable to Turbomeca S.A. Arriel 1 A, 1 A1, 1 A2, 1 B, 1 C, 1 C1, 1 C2, 1 D, 1 D1, 1 E, 1 E2, 1 K, 1 K1, 1 S, and 1 S1 turboshaft engines. These engines are installed on, but not limited to, Eurocopter AS 350, AS 350B1, AS 350B2, AS 365C, AS 365C2, AS 365N, AS 365N1, AS 365N2, BK 117C1, BK 117C2, Augusta A109 K2, and Sikorsky S76 C helicopters.

**Note 1:** This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Compliance with this AD is required as indicated, unless already done.

To prevent an unbalance of the gas generator rotating assembly which may lead to deterioration of the gas generator rear bearing and also to uncommanded engine shutdown, do the following:

### **Initial Inspections and Cleaning**

(a) For engines that have been operated in a dusty or erosive atmospheric environment containing substances such as laterite, sand, volcanic ash, and chemical particles, and engines for which the operating environment cannot be determined, do the following:

(1) Perform an initial visual inspection for erosion of the axial compressor, within 50 operating hours after the effective date of this AD. Information on inspecting can be found in Turbomeca S.A. Mandatory Service Bulletin (MSB) No. 292 72 0230, dated October 16, 1998.

### **Modification TU 175 Not Incorporated**

(2) For engines that do not have Modification TU 175 incorporated, if axial compressor erosion is above 1.5 millimeters in area III as defined in the engine maintenance manual, even if it has not reached 1,000 operating hours, and if the module M03 has operated more than 200 hours with this M02 module, clean the M03 module within the next 50 operating hours. Information on cleaning can be found in Turbomeca S.A. MSB No. 292 72 0230, dated October 16, 1998.

## **Modification TU 175 Incorporated**

(3) For engines that have Modification TU 175 incorporated, if axial compressor erosion inspection requires the M02 module to be removed, and if the M03 module has operated more than 400 hours with this M02 module, clean the M03 module within the next 50 operating hours. Information on cleaning can be found in Turbomeca S.A. MSB No. 292 72 0230, dated October 16, 1998.

## **Reconditioning and Checks**

(b) Perform reconditioning and checks of the engines. Information on reconditioning and checks can be found in Turbomeca S.A. MSB No. 292 72 0230, dated October 16, 1998.

## **Repetitive Inspections**

(c) Repeat axial compressor erosion inspections within every 200 operating hours-since-last-inspection (HSLI) for engines that do not have Modification TU 175 incorporated, and within every 400 operating HSLI, for engines that have Modification TU 175 incorporated, as specified in paragraph (a) of this AD.

## **Alternative Methods of Compliance**

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

**Note 2:** Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the ECO.

**Note 3:** A list of authorized repair centers qualified to carry out gas generator rotating assembly maintenance and cleaning may be obtained from Turbomeca S.A. or the ECO.

## **Special Flight Permits**

(e) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the helicopter to a location where the requirements of this AD can be done.

**Note 4:** The subject of this AD is addressed in Direction Generale de L'Aviation Civile airworthiness directive 1990-064(A), Revision 1, dated March 21, 2000.

## **Effective Date**

(f) This amendment becomes effective on July 25, 2003.

Issued in Burlington, Massachusetts, on June 13, 2003.  
Peter A. White,  
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.  
[FR Doc. 03-15448 Filed 6-19-03; 8:45 am]  
BILLING CODE 4910-13-P